Listing of Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Previously Presented) A water purification apparatus comprising:

a cathode compartment;

an anode compartment;

at least one ion-depleting compartment fluidly connected to the cathode compartment, ~~a~~ the at least one ion-depleting compartment positioned between the cathode compartment and the anode compartment; and

at least one ion-concentrating compartment fluidly connected to the anode compartment, the at least one ion-concentrating compartment in ionic communication with the at least one ion-depleting compartment.

2. (Canceled)

3. (Original) The water purification apparatus of claim 1 wherein the cathode compartment is in fluid communication with a purified fluid outlet.

4. (Original) The water purification apparatus of claim 3 wherein the purified fluid outlet is downstream of the cathode compartment.

5. (Original) The water purification apparatus of claim 1 wherein at least a portion of any water in the apparatus is grounded via a cathode.

6. (Previously Presented) A method of purifying a fluid comprising:

passing a first fluid through an ion-depleting compartment of an electrochemical device to produce a second fluid;

passing at least a portion of the second fluid through a cathode compartment of the electrochemical device;

passing a third fluid through an anode compartment of the electrochemical device to produce an anolyte; and

passing at least a portion of the anolyte through at least one ion-concentrating compartment of the electrochemical device.

7. (Original) The method of claim 6 wherein all of the second fluid is passed through the cathode compartment.

8. (Original) The method of claim 6 further comprising dissolving hydrogen in the second fluid.

9. (Previously Presented) The method of claim 6 further comprising:

wherein passing the third fluid through the anode compartment comprises reducing a Langelier Saturation Index (LSI) of the third fluid.

10. (Original) The method of claim 9 wherein the LSI is reduced to less than about 0.

11. (Previously Presented) The method of claim 6 further comprising delivering at least a portion of the second fluid to a point of use after it has flowed through the cathode compartment.

12. (Original) The method of claim 6 further comprising reducing the corrosiveness of the second fluid.

13. (Original) The method of claim 6 wherein greater than about 10% and less than about 90% of the hardness is removed from the second fluid.

14. (Original) The method of claim 13 wherein more than about 30% and less than about 70% of the hardness is removed from the second fluid.

15. (Original) The method of claim 13 wherein more than about 50% of the hardness is removed from the second fluid.

16. (Original) The method of claim 6 wherein the electrochemical device comprises an electrodeionization device.

17. (Original) The method of claim 6 wherein the electrochemical device comprises an electrodialysis device.

18. (Previously Presented) A method of purifying water comprising:

passing a first portion of a first water stream through a cathode compartment of a water purification apparatus to produce a second water stream;

passing at least a portion of the second water stream through at least one ion-depleting compartment of the water purification apparatus to produce purified water stream;

passing a second portion of the first water stream through at least one ion-concentrating compartment of the water purification apparatus;

passing the second portion of the first water stream through an anode compartment of the water purification apparatus; and

reducing the LSI of the second portion of the first water stream.

19. (Previously Presented) The method of claim 18 further comprising dissolving hydrogen in the second water stream.

20. (Canceled)

21. (Previously Presented) The method of claim 18 further comprising delivering the purified water stream to a point of use.

22. (Original) The method of claim 18 further comprising reducing the corrosiveness of the second water stream.

23. (Original) The method of claim 18 wherein greater than 10% and less than 90% of the hardness is removed from the second water stream.

24. (Original) The method of claim 23 wherein more than about 30% and less than about 70% of the hardness is removed from the second water stream.

25. (Original) The method of claim 23 wherein more than about 50% of the hardness is removed from the second water stream.

26. (Original) The method of claim 18 wherein the LSI is reduced to less than about 0.

27. (Original) The method of claim 18 wherein the water purification apparatus comprises an electrodeionization apparatus.

28. (Previously Presented) A method comprising:

passing a first portion of a first fluid through an ion-concentrating compartment of an electrochemical device to produce a second fluid;

passing a second portion of the first fluid through an ion-depleting compartment of the electrochemical device to produce a third fluid;

reducing the pH of the second fluid in an anode compartment of the electrochemical device; and

reducing the corrosiveness of the third fluid.

29. (Original) The method of claim 28 wherein the corrosiveness of the third fluid is reduced by adding hydrogen gas to the fluid.

30. (Previously Presented) The method of claim 28 wherein the corrosiveness of the third fluid is reduced in a cathode compartment of the electrochemical device.

31. (Original) The method of claim 28 further comprising passing the third fluid to a domestic point of use.

32. (Previously Presented) The method of claim 28 further comprising recirculating at least a portion of the third fluid through the ion-depleting compartment.